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**THE UNITED STATES DISTRICT COURT  
 FOR THE NORTHERN DISTRICT OF CALIFORNIA**

----- x  
 :  
 LARKIN COMMUNITY HOSPITAL, on :  
 behalf of itself and all others similarly :  
 situated :  
 :

Plaintiff,

v.

INTUITIVE SURGICAL, INC.

Defendant.  
 ----- x

**Civil Action No. 3:21-cv-03825**

**COMPLAINT AND JURY DEMAND**

Plaintiff Larkin Community Hospital, on behalf of itself and all others similarly situated,  
 upon knowledge with respect to its own actions and upon information and belief with respect to  
 all other matters, alleges by way of Complaint against Defendant Intuitive Surgical, Inc.  
 (“Intuitive”):

## **INTRODUCTION**

1  
2 1. This antitrust action, brought under Sections 1 and 2 of the Sherman Act, involves  
3 abuse of monopoly power claims, including a tying and monopoly leveraging scheme  
4 implemented by Intuitive in the sale of its da Vinci Surgical Robot System (“da Vinci”). Intuitive  
5 has obtained patents giving it monopoly power in the U.S. surgical robot market, but unlawfully  
6 leveraged that power to restrict competition in the separate (a) da Vinci surgical robot service  
7 aftermarket, and (b) da Vinci surgical robot instrument service aftermarket, by, among other  
8 things as alleged herein, tying the sale of the da Vinci to the service of the robot and the  
9 necessary robot instruments.  
10

11 2. Intuitive conditions the sale or lease of the da Vinci on the purchaser’s acceptance  
12 of Intuitive’s mandatory service contract. The service contract requires the purchaser to use  
13 Intuitive as the sole service provider for all da Vinci systems, and prohibits the purchaser from  
14 either servicing the robot itself or hiring an independent robot repair company (“IRRC”) to  
15 service the da Vinci.  
16

17 3. Intuitive also ties the service, including repair and replacement, of da Vinci  
18 surgical instruments, sold under the brand name “EndoWrist,” to the sale or lease of its robot  
19 system. Intuitive restricts the number of times a purchaser may use the EndoWrist instruments, in  
20 most cases to a mere ten uses. This forces Plaintiff and proposed Class members to purchase  
21 substantially more EndoWrists than necessary, rather than allowing the EndoWrists to be  
22 serviced and repaired for longer use, more in keeping with their useful lives. Intuitive’s service  
23 of an EndoWrist instrument typically involves the sale and installation of a new replacement  
24 EndoWrist. According to the terms of the da Vinci sales agreements and service contracts,  
25 hospitals cannot hire IRRCs to service or repair their EndoWrist instruments (i.e., clean or  
26 sharpen them for longer use).  
27  
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1           4.       There are relevant primary markets for (a) surgical robots, (b) surgical robot  
2 instruments, and (c) the repair and/or replacement of surgical robots and surgical robot  
3 instruments. Additionally, there are relevant aftermarkets for service of (a) da Vinci robots; and  
4 (b) EndoWrist instruments (which includes their repair and replacement), which are separate  
5 from the primary markets. Intuitive has monopoly power in every relevant market and  
6 aftermarket. Intuitive's abuse of monopoly power scheme illegally exploits its market power in  
7 the surgical robot market to foreclose competition in the da Vinci Service and EndoWrist Service  
8 Aftermarkets. The scheme is successful and has almost completely inhibited competition in the  
9 service aftermarkets for either the da Vinci or EndoWrists, thus precluding customers from using  
10 the IRRCs, which deliver the same quality service at lower prices. Intuitive's conduct has  
11 thereby significantly increased costs to Plaintiff and the proposed Class. For example, IRRCs  
12 Restore Robotics LLC ("Restore"), Surgical Instrument Service Company, Inc. ("SIS"), Revanix  
13 Biomedical ("Revanix"), and Rebotix Repair LLC ("Rebotix") offer repair services for the da  
14 Vinci and EndoWrists by skilled and experienced technicians.

15  
16  
17           5.       Defendant's anticompetitive scheme has had the effect of driving the majority of  
18 Intuitive's annual revenues: in 2019, Intuitive reported product revenue of \$2.621 billion in the  
19 U.S. out of a total \$3.1 billion in U.S. revenue. Product revenues comprise revenues from the  
20 sales of da Vincis, accompanying accessories, EndoWrists and replacement EndoWrists. Most of  
21 Intuitive's U.S. revenue (57%) was attributable to instrument and accessory sales and  
22 replacement, and 16% was attributable to service contracts. While the coronavirus pandemic  
23 reduced the overall da Vinci-related revenues in 2020, Intuitive's revenues from its related  
24 service and repair offerings still exceeded \$2 billion in 2020 and represented approximately 77%  
25 of its total revenue in the U.S.  
26  
27  
28

6. But for Intuitive's unlawful abuse of monopoly power, IRRCs could service the da Vinci and EndoWrists, which would allow for competitive pricing in the da Vinci and EndoWrist Service Aftermarkets. For example, SIS states it charges its customers approximately 30-45% less to clean or repair an EndoWrist than Intuitive charges to replace the same EndoWrist. Restore also estimates that Intuitive charges approximately 30% higher prices on average for EndoWrist replacement as compared to EndoWrist repairs performed by IRRCs. Denying IRRCs the ability to service da Vincis forces Plaintiff and proposed Class members such as hospitals and clinics to pay supercompetitive prices for these services. Likewise, denying IRRCs the ability to service EndoWrists forces Plaintiff and proposed class members to spend thousands of dollars replacing instruments that could be repaired and safely reused throughout those instruments' useful lives.

7. For these reasons and to remedy the injuries that have been caused by Intuitive's anticompetitive conduct, Plaintiff and the proposed Class seek treble damages.

## PARTIES

8. Plaintiff Larkin Community Hospital is a Florida corporation with its principal place of business located in Miami, Florida. Plaintiff Larkin leased two da Vincis, an Xi and an Si, from Defendant Intuitive in June 2017, pursuant to written lease agreements. During the proposed Class Period (defined in paragraph 104, *infra*), Larkin paid for and/or purchased service to its (a) da Vincis, and (b) EndoWrists. In 2018, in an effort to save significant costs on its EndoWrist service and replacements. Plaintiff engaged with Revanix, an IRRC they had used before in connection with the service and repair of other types of medical equipment. Thus, Larkin was confident that Revanix could adequately service its EndoWrists at significant cost savings to Larkin. However, before Larkin could hire Revanix, it became clear that Intuitive was prepared to serve Larkin (and Revanix) with cease-and-desist letters and void the warranty on

1 Larkin's da Vincis. Based on those threats, Larkin stopped its efforts to have Revanix service its  
2 EndoWrists. Larkin continued to operate its da Vincis in 2019 and 2020, and was forced to  
3 replace its EndoWrists, at much higher costs, by purchasing them from Intuitive. As a result of  
4 Intuitive's antitrust violations, Plaintiff and members of the proposed Class (defined in paragraph  
5 104, *infra*) have been injured in their business or property.

6 9. Defendant Intuitive Surgical, Inc. is a Delaware corporation with its principal  
7 place of business at 1020 Kifer Road, Sunnyvale, CA. Intuitive is the creator and manufacturer  
8 of the da Vinci, along with its accessories and instruments, including the EndoWrist line of  
9 surgical instruments. Intuitive directly sells da Vincis and EndoWrists, along with associated  
10 parts and services, to hospitals, clinics and surgical centers throughout the United States,  
11 including in the Northern District of California.

#### 12 **VENUE AND JURISDICTION**

13  
14 10. This complaint is filed under Sections 1 and 2 of the Sherman Act, 15 U.S.C. §§ 1  
15 and 2. This Court has jurisdiction over the federal antitrust law claims alleged herein under 28  
16 U.S.C. §§ 1331, 1337, 2201 and 2202, and 15 U.S.C. §§ 15 and 26.

17  
18 11. Defendant transacts business and is found in this district. Substantial interstate  
19 trade and commerce involved and affected by the alleged violations of antitrust law occurs  
20 within this district. The acts complained of have had substantial anticompetitive effects in this  
21 district. Venue is proper in this district under 28 U.S.C. § 1391 and 15 U.S.C. §§ 15, 22 and 26.

22  
23 12. Intradistrict Assignment. Although antitrust class actions are excluded from Local  
24 Rule 3-2(c), Intuitive is headquartered in Sunnyvale, California and the parties have agreed to  
25 venue in Santa Clara County.

## **GENERAL ALLEGATIONS**

### **A. Relevant Markets**

#### **1. The Robotic Surgical Systems Market and Intuitive's Monopoly Power in That Market**

##### **a. The Robotic Surgical Systems Product Market**

13. Robotic surgical systems are used for minimally invasive soft tissue surgeries performed between the pelvis and the head. Robotic surgery, like laparoscopic surgery done by hand, makes several incisions in soft tissue for the insertion of small surgical instruments to perform a surgical procedure. The surgeon, sitting at a computer, uses hand-controls to manipulate the instruments that are attached to the system by robotic arms with joints.

14. Robotic surgeries greatly mirror laparoscopic surgeries that have been performed by hand for decades. However, robotic surgeries have a variety of practical advantages over traditional laparoscopic surgeries, including:

- i. Stereoscopic high-definition cameras for 3-D visibility;
- ii. An additional robotic arm that allows the simultaneous use of three instruments;
- iii. Wrist joints that allow for an expanded range of motion compared to human mobility;
- iv. The ability to precisely perform small discrete movements with the robotic arms and instruments;
- v. Minimizing surgeon fatigue; and
- vi. Decreasing complication rates and reducing the lengths of patient stays.

15. There is a relevant product market for robotic surgical systems. Surgical robots have no practical substitute, because although robotic surgery is significantly more expensive

1 and less profitable than traditional laparoscopic surgical procedures, hospitals are expected to  
2 offer robotic surgeries.

3 16. In fact, the very characteristics that make surgical robots unique and more  
4 expensive – enhanced visualization using high-definition cameras, precise and tremor-free  
5 instrument controls, advanced instrumentality, and improved surgeon ergonomics – make robotic  
6 surgeries preferable to traditional laparoscopic procedures for surgeons. Notwithstanding the fact  
7 that robotic surgery is itself more expensive than traditional laparoscopic surgery, hospitals  
8 believe that robotic surgery can lower the overall cost to treat per episode by reducing  
9 complications, shortening recovery times and hospital stays, and resulting in better long-term  
10 health outcomes and higher patient satisfaction than with traditional laparoscopic surgery. Many  
11 patients find that robotic surgery reduces pain, scarring, and is safer and more effective than  
12 traditional laparoscopic surgeries. Thus, robotic surgery is generally preferable for hospitals and  
13 their surgeons and patients.  
14

15 17. There is a very low cross-elasticity of demand between surgical robots and  
16 laparoscopic surgery equipment, instruments, and service. A 2017 study estimated that hospitals  
17 spent \$1,701 on average per surgical robot procedure, which includes purchasing and  
18 maintaining the system, an expense that is novel to robotic surgery.<sup>1</sup> It also found that the robotic  
19 surgical system's instruments and accessories cost on average \$1,866 per procedure.<sup>2</sup> By  
20 comparison, the study estimated that instruments in traditional laparoscopic surgeries cost less  
21 than \$1,000 per procedure.<sup>3</sup> Further, most insurance plans pay the same amount for minimally  
22 invasive robotic surgery and laparoscopic surgery, such that patients pay much more out of  
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26 <sup>1</sup> Christopher P. Childers and Melinda Maggard-Gibbons, Research Letter: Estimation of the Acquisition and  
27 Operating Costs for Robotic Surgery, 320 Journal of American Medical Association 835, 836 (August 28, 2018).

<sup>2</sup> *Id.*

<sup>3</sup> *Id.*

1 pocket for minimally invasive robotic surgery and hospitals have lower (and sometimes  
2 negative) margins on minimally invasive robotic surgery. Nevertheless, the estimated procedure  
3 volume for robotic surgery increased from 136,000 in 2008 to 877,000 in 2017 for a  
4 compounded annual growth rate of 23%.<sup>4</sup> Thus, it is apparent that an increase in the cost of a  
5 minimally invasive surgical robot, instruments, and service does not lead doctors or patients to  
6 choose laparoscopic or traditional surgery equipment instead, nor would a change in the cost of  
7 traditional or laparoscopic equipment affect the market for minimally invasive surgical robots,  
8 instruments, and service.  
9

10 18. Likewise, instead of using cheaper laparoscopic equipment for surgeries, hospitals  
11 are investing millions in replacing their laparoscopic equipment with robotic surgical systems,  
12 even at much higher prices. Accordingly, neither laparoscopic surgery nor any other procedure is  
13 substitutable with a robotic surgical system, as hospitals will not switch to those procedures even  
14 if the price of the robotic surgical system is raised above competitive levels.  
15

16 19. Robotic surgical systems and traditional laparoscopic surgical equipment occupy  
17 separate economic markets. The financial and healthcare press refer specifically to the market for  
18 surgical robots and competition in surgical robots. Surgeons can specialize in robotic surgery,  
19 and there are several professional and trade associations focused on robotic surgery such as the  
20 Society for Robotic Surgery and the Clinical Robotic Surgery Association. Surgical robots have  
21 very distinct prices.  
22

23 20. Intuitive, founded in 1995, designs, manufactures, and markets the da Vinci  
24 directly to its customers in the U.S. The Food and Drug Administration (“FDA”) approved the da  
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28 <sup>4</sup> *Id.*



1 Vinci for general laparoscopic surgery in 2000.<sup>5</sup> It was the only surgical robot system approved  
2 by the FDA for sale in the U.S. market until 2015. It is approved for both adult and pediatric use.

3 21. The da Vinci, pictured below in Figure 1, consists of three main components: the  
4 surgeon's console where the surgeon sits to perform the operation; the patient-side cart which  
5 holds the camera and surgical instruments controlled by the surgeon; and the vision system  
6 which manages communication between all the system's component parts and has a view screen  
7 that allows the care team to view the surgery in real time.<sup>6</sup>  
8

9 Figure 1: The Da Vinci Surgical System



23  
24 22. There are four generations of Intuitive da Vincis: the latest generation includes the  
25 Xi, X, and SP models. The third generation includes the Si model; the second is the S model; and  
26

27 <sup>5</sup> Intuitive (Form 10-K), at 5 (Feb. 10, 2021).

28 <sup>6</sup> *Id.* at 6.

1 the first-generation system is the ‘standard’ surgical system. The da Vinci SP is the latest system  
2 to be launched, in 2018.<sup>7</sup> The da Vinci X and Xi systems utilize different surgical instruments  
3 than earlier generation systems.

4 23. Intuitive sells the da Vinci directly to hospitals and surgical centers, and also  
5 enters lease arrangements directly with certain qualified customers, a practice it started in 2013.<sup>8</sup>  
6 It has also entered usage-based arrangements with larger customers. Under such arrangements,  
7 hospitals are charged for the system and service as the systems are utilized.  
8

9 24. As of December 31, 2020, Intuitive had an installed base of 3,720 da Vincis in the  
10 U.S.<sup>9</sup> The U.S. installed base has increased by over 45% in the past four years alone: as of  
11 December 31, 2016, Intuitive had an installed base of 2,563 da Vincis in the U.S.<sup>10</sup> Moreover,  
12 despite the coronavirus pandemic, the U.S. installed base grew by over 5% in 2020.<sup>11</sup>

13 25. The da Vinci is a minimally invasive soft tissue surgical robot and may be used to  
14 perform a variety of surgical procedures including general, gynecologic, urologic, cardiothoracic,  
15 and head and neck surgeries. While other companies have introduced products in the field of  
16 robotic-assisted surgery, most of those machines cannot be used for minimally invasive soft  
17 tissue surgeries and none is a significant competitor in the surgical robot market. For example, a  
18 natural orifice surgical robot allows a surgeon to insert a flexible scope with a camera into the  
19 abdominal cavity via one of the body’s natural orifices. The surgeon may then perform throat,  
20 neck, or colorectal surgical procedures. However, the robot can only operate instruments  
21 introduced through the tube inserted into the natural orifice. It is also not indicated for pediatric  
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23

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24 <sup>7</sup> *Id.* at 63.

25 <sup>8</sup> Intuitive (Form 10-K), at 56 (Feb. 10, 2021). Intuitive also sells the da Vinci directly to leasing companies. When  
26 hospitals acquire da Vincis through leasing companies, hospitals enter an independent arrangement with the leasing  
company. *Id.*

27 <sup>9</sup> *Id.* at 10 (Feb. 10, 2021).

<sup>10</sup> Intuitive (Form 10-K), at 9 (Feb. 6, 2017).

<sup>11</sup> Intuitive (Form 10-K), at 10 (Feb. 7, 2020) (3,531 systems in the U.S. as of December 31, 2019).

1 use. The constraints imposed by both the mode of access and the limited availability of tools for  
2 use with natural orifice surgical robots pose several challenges for surgeons and preclude it from  
3 competing in the surgical robot market. Likewise, orthopedic robots, which are designed for  
4 assisting in the removal of bone and aligning prosthetics for knee and hip replacement, are not  
5 indicated for use in minimally invasive soft tissue surgery and are not a practical substitute for  
6 surgical robots.

7  
8 26. In 2020, approximately 876,000 procedures were performed using the da Vinci in  
9 the U.S.<sup>12</sup>

10 27. The da Vinci ranges in price from \$500,000 to \$2.5 million. Intuitive reported  
11 \$830.7 million in revenue from da Vinci sales in the U.S. in 2019, accounting for 61.7% of  
12 systems sales worldwide.<sup>13</sup>

13 28. Intuitive sells all necessary robot service, and over 80 different types of surgical  
14 instruments for use with the da Vinci under the EndoWrist brand. As shown in Figure 2, below,  
15 EndoWrist instruments are modeled after the human wrist and offer a greater range of motion  
16 than the human hand. Figure 3, below, demonstrates the variety of EndoWrists available to  
17 hospitals.  
18

19 Figure 2: EndoWrist modeled after human hand<sup>14</sup>  
20  
21  
22  
23  
24  
25

26 <sup>12</sup> Intuitive (Form 10-K), at 60 (Feb. 10, 2021).

27 <sup>13</sup> Intuitive (Form 10-K), at 87 (Feb. 7, 2020).

28 <sup>14</sup> Palep J. H. (2009). Robotic assisted minimally invasive surgery. *Journal of minimal access surgery*, 5(1), 1–7. <https://doi.org/10.4103/0972-9941.51313>; Intuitive; and Longmore, S. K., Naik, G., & Gargiulo, G. D. (2020). *Laparoscopic Robotic Surgery: Current Perspective and Future Directions*. *Robotics*, 9(2), 42.

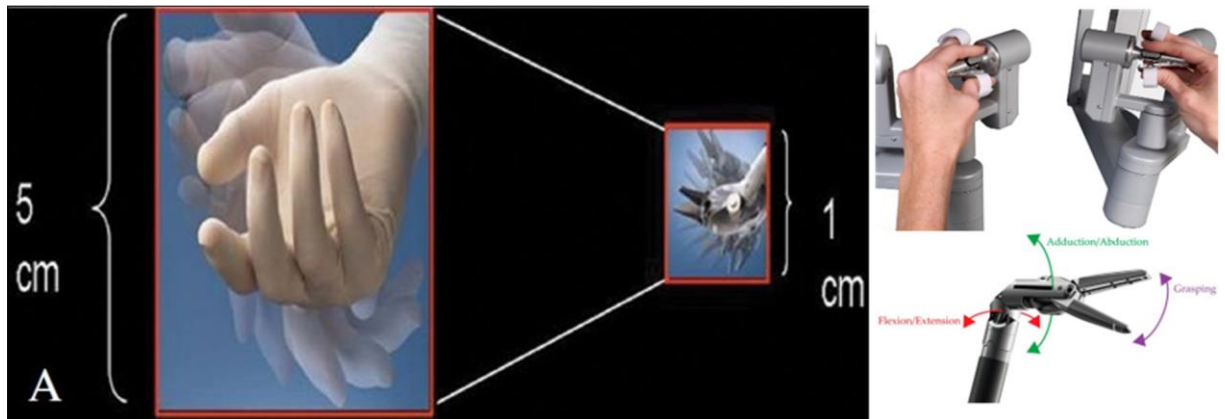


Figure 3: Variety of EndoWrists available for use with the da Vinci



29. Intuitive sells a variety of EndoWrist instruments with customizable tips for various surgical procedures including forceps, scissors, scalpels, and clamps. The da Vinci was designed to work exclusively with instruments manufactured and sold by Intuitive. Thus, EndoWrists are the only instruments compatible with the da Vinci and the only instruments approved by the FDA for use with the da Vinci.

30. As derivative markets of the da Vinci system, the demand for da Vinci and EndoWrist service is directly linked to the installed base of da Vincis and how often those systems are used.

31. Intuitive installs a programmable memory chip inside each instrument that limits the number of times the instrument may be used. A majority of EndoWrists have a maximum usage limit of 10.

**b. The Geographic Market for Surgical Robot Systems**

32. There is a national geographic market for surgical robot systems in the U.S. The FDA regulates the approval of all medical equipment in the U.S., including surgical robot systems. Manufacturers who wish to sell surgical robot systems in the U.S. must obtain FDA approval before doing so.

33. The surgical robot systems approved for use in the U.S. are not substitutable; hospitals cannot import or operate non-approved surgical robot systems.

34. U.S. hospitals are thus unable to buy surgical robot systems from suppliers in other countries, even if Intuitive raises its surgical robot system prices above competitive levels.

**c. Intuitive Has a Monopoly in the U.S. Market for Surgical Robots.**

35. Intuitive has monopoly power in the U.S. market for the sale of minimally invasive soft tissue surgical robots and, as a result, can and does exclude competition and maintain supracompetitive prices for the da Vinci.

36. The number of procedures performed using the da Vinci has typically increased at least 14% year-over-year since 2017, with a 1% decrease in procedures performed in 2020 due to the ongoing Coronavirus pandemic.<sup>15</sup>

37. In its most recent Annual Report, Intuitive states that it faces competition in the fields of “existing open surgery, conventional MIS [minimally invasive surgery], drug therapies, radiation treatment, and emerging interventional surgical approaches” and robotic-assisted surgery.<sup>16</sup> Intuitive does not cite any competition in the robotic surgical system market. A company called Asensus (formerly known as TransEnterix) received FDA approval for commercial sale of its surgical robot in the U.S. in 2017,<sup>17</sup> shown below in Figure 4. Sold under

<sup>15</sup> Intuitive (Form 10-K), at 60 (Feb. 10, 2021).

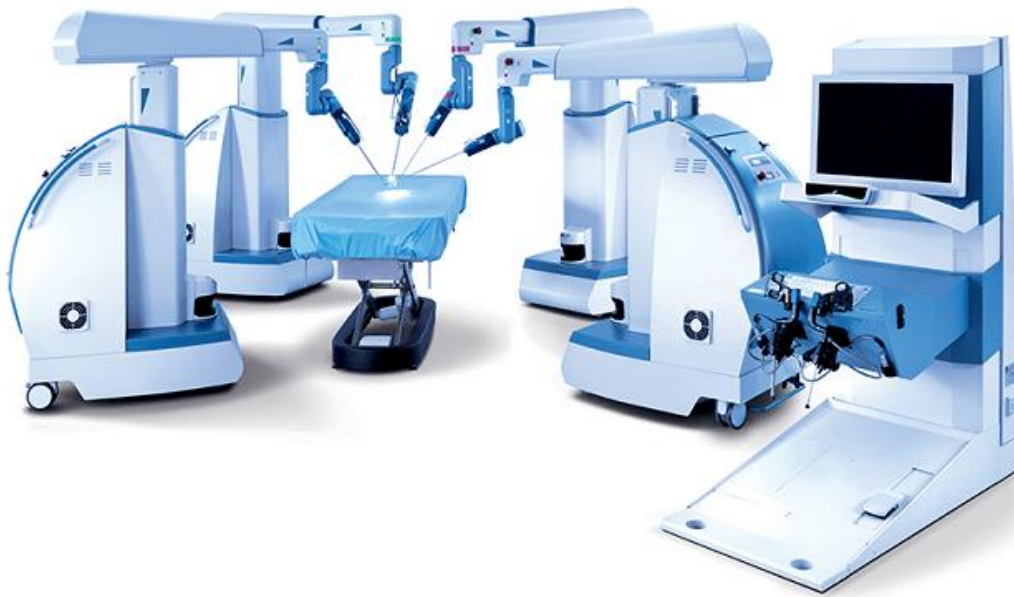
<sup>16</sup> *Id.* at 12.

<sup>17</sup> Asensus (f.k.a. TransEnterix) (Form 10-K), at 4 (March 16, 2020).



1 the Senhance brand name, the robot is approved to perform gynecological, colorectal, and  
2 cholecystectomy surgeries, and inguinal hernia repair. It cannot perform certain surgeries, such  
3 as cardiothoracic or urological surgeries, making it less functional than the da Vinci. Nor is it  
4 approved for pediatric use. Asensus reported just \$90,000 in revenues from system sales in 2019  
5 in the U.S. and has had “limited commercial success to date” in the U.S.<sup>18</sup>

6 Figure 4: Senhance Surgical Robot<sup>19</sup>



19 38. Asensus’ *de minimis* market share in the surgical robot market is due to Intuitive’s  
20 long established presence in U.S. hospitals, the amount of experience U.S. surgeons have with  
21 the da Vinci, and the number of da Vincis installed in the U.S. versus Senhance robots. Thus,  
22 neither Senhance, nor any other company, is a significant competitor in the surgical robot  
23 market.  
24

25  
26 <sup>18</sup> *Id.* at 13.

27 <sup>19</sup> *TransEnterix, Inc. Unveils New Brand Identity for Robotic Surgical System: Establishes Senhance™ to*  
28 *Communicate New Era in Robotic Surgery*, BusinessWire (Sept. 7, 2016),  
<https://www.businesswire.com/news/home/20160907005187/en/TransEnterix-Inc.-Unveils-New-Brand-Identity-for-Robotic-Surgical-System>.

1           39. While other companies have introduced products in the field of robotic-assisted  
2 surgery, these machines are not part of the surgical robot market and thus are not competitors of  
3 Intuitive's da Vinci. For example, a company called Medrobotics received clearance for a natural  
4 orifice surgical robot on July 23, 2015. However, the robot, sold under the Flex system brand  
5 name, can only operate instruments introduced through the tube inserted into the natural body  
6 orifice. Thus, due to its design limitations, it is only indicated for a limited range of procedures  
7 and is not a direct competitor to the da Vinci. And Asensus' Senhance system is not intended for  
8 most other procedures that the da Vinci may perform.  
9

10           40. Prior to FDA approval of the Senhance system for minimally invasive robotic  
11 surgeries, Intuitive maintained a 100% market share for surgical robots. Even after Senhance and  
12 Medrobotics entered the robotic surgery market, Intuitive still maintains at least a 98% market  
13 share in the market for surgical robots because neither company has been able to gain sufficient  
14 U.S. market share to pose a meaningful threat to Intuitive's market dominance. While Intuitive  
15 shipped 728 da Vincis throughout the U.S. in 2019, Asensus did not ship any Senhance systems  
16 domestically and Medrobotics shipped fewer than 10 Flex robot systems worldwide.  
17

18           41. External literature characterizes Intuitive as possessing monopoly power in the  
19 robotic surgical system market. For example, one 2017 study in the Journal of Minimal Access  
20 Surgery noted that Intuitive's da Vinci was "the only commercially available robotic equipment"  
21 at the time.<sup>20</sup> Similarly, a 2019 study on robotic surgery noted that Intuitive "[e]ffectively  
22 [possessed] a monopoly" in the robotic surgery industry.<sup>21</sup>  
23  
24  
25

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26 <sup>20</sup> Gkegkes, I. D., Mamais, I. A., & Iavazzo, C. (2017). Robotics in General Surgery: A Systematic Cost  
27 Assessment. *Journal of Minimal Access Surgery*, 13(4), 243–255. <https://doi.org/10.4103/0972-9941.195565>

28 <sup>21</sup> Perez, R. E. & Schwaitzberg, S. D., Robotic Surgery: Finding Value in 2019 and Beyond, *Ann. Laparosc. Endosc. Surg.* 2019; 4:51.



1           42.     Switching surgical robot systems is not feasible. First, surgical robot systems  
2 require significant capital investment in not only the system itself, but also the necessary surgical  
3 instruments and, in many cases regarding the da Vinci, an agreement by Intuitive's customers not  
4 to purchase competing robots. Further, operating a robotic surgical system requires many hours  
5 of training. Switching surgical robot systems would not only be costly, as surgical robots have an  
6 average sales price of \$1.5 million and many of Intuitive's U.S. customers have at least 2  
7 systems representing significant capital investment, but would also require substantial time to  
8 retrain surgeons and supporting staff to operate the new system, during which time a hospital  
9 may not be able to offer robotic surgical services.  
10

11           43.     In addition, Intuitive incentivizes hospitals to upgrade their existing da Vincis by  
12 offering them the opportunity to trade in their older da Vincis for a credit towards the purchase  
13 of a newer generation system.<sup>22</sup>  
14

15           44.     There are significantly high barriers to entry into the surgical robot market. The  
16 cost to develop a surgical robot is substantial, especially because Intuitive maintains an extensive  
17 portfolio of patents that block the development of competing surgical robot systems.  
18 Furthermore, clearance by regulatory agencies, such as the FDA, is an extensive and uncertain  
19 process. Penetrating the market is also challenging; surgeons already have significant training  
20 and experience with the da Vinci, not to mention the already sizeable installed base of da Vincis  
21 throughout the U.S. Furthermore, according to ¶ 23 of a complaint IRRC Restore filed against  
22 Intuitive on March 29, 2021, Intuitive has agreements with its customers that they will not  
23 purchase robotic surgery systems from competing manufacturers.  
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28 <sup>22</sup> Intuitive (Form 10-K), at 89 (Feb. 10, 2021).

45. Further, Intuitive enjoys a first mover advantage in the market because the da Vinci was the first robotic surgery system approved by the FDA in 2000. Consequently, many surgeons received extensive training to use the da Vinci during their residency, so hospitals wishing to attract surgeons who can perform robotic surgeries (and consequently the patients who wish to receive robotic surgery) are disincentivized from installing other robotic surgery systems. This also limits the extent to which other robotic systems can compete effectively in the market.

## **2. The da Vinci Service Aftermarket and Intuitive's Monopoly Power in That Aftermarket**

### **a. The Da Vinci Service Aftermarket**

46. There is a relevant aftermarket in the U.S. for the service of da Vincis (the “da Vinci Service Aftermarket”). The robotic surgery equipment manufacturing industry generates about \$3.8 billion in revenues per year in the U.S. and is expected to grow by 4.9% per year between 2020-2025.<sup>23</sup> In addition, the medical equipment repair and maintenance services industry is a \$3.3 billion market in the U.S. and is expected to grow by 1.5% per year between 2020-2025.<sup>24</sup>

47. After the da Vinci is installed, it requires regular maintenance and service. The primary aspects of the da Vinci Service Aftermarket are the routine maintenance of the da Vinci and the repair of the da Vinci when necessary.

48. Recognizing this need for regular repair and maintenance, Intuitive enters into a service contract with their customers at the time the da Vinci is sold or leased.<sup>25</sup> The initial service contract is typically 5 years, with the first year of service being free and the remaining 4

<sup>23</sup> Thomas Crompton, “Robotic Surgery Equipment Manufacturing”, IBIS World, Dec 2020, at 7.

<sup>24</sup> Jack Curran, “Medical Equipment Repair & Maintenance Services,” IBIS World, June 2020, at 7.

<sup>25</sup> Intuitive (Form 10-Q), at 29 (June 2020).

1 years ranging in price from \$80,000 to \$190,000 per year.<sup>26</sup> At present, Intuitive requires its  
2 customers to purchase one of two types of service plans for its da Vincis, either:

- 3 i. the Complete Care Service Plan, which includes advance exchange program,  
4 remote software update, sterile reprocessing support, technical support, onsite  
5 access and monitoring and da Vinci surgery customer portal; or
- 6 ii. the Premium Care Service Plan, which includes everything in the Complete  
7 Care service plan and provides extended service hours, faster response time,  
8 expedited replacement parts and a 5% discount on technology upgrade, among  
9 other things.<sup>27</sup>

10  
11 49. At the end of each contract term, Intuitive offers an additional service contract.  
12 Customers are forced to renew these contracts because, as long as they use the da Vinci,  
13 purchasers are required to obtain service and repairs from Intuitive.

14 50. The terms of the service contracts exempt Intuitive from its obligation to perform  
15 any service or repair if the customer or a third-party services the da Vinci, even if Intuitive's  
16 service contract did not cover the service.

17  
18 51. Customers have little or no information for projecting the costs of surgical robot  
19 parts or service, even with flat-rate service agreements. In order to forecast the cost per use, the  
20 customer must know how often the robot will be used. However, customers typically cannot  
21 forecast demand for a surgical robot: surgeons may have varying degrees of adaptation to a  
22 surgical robot at a new location or for a new procedure; competing hospitals may or may not  
23 acquire their own robots; and the FDA may or may not add new indications for use of the robot  
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27 <sup>26</sup> Intuitive (Form 10-K), at 55 (Feb. 10, 2021).

28 <sup>27</sup> da Vinci service plan brochures are available at <https://www.intuitive.com/en-us/products-and-services/da-vinci/services##>.

1 system. These and other unknown factors will impact how often a da Vinci is used, and thus  
2 bears on part replacement and service costs.

3 52. There are high barriers to entry in the da Vinci Service Aftermarket. First, the  
4 terms of the da Vinci sales agreement and the tied da Vinci service contracts prohibit customers  
5 from servicing their da Vinci either themselves or through an IRRC. Lessees of the da Vinci  
6 must enter the same service contract for the term of the lease. This discourages customers from  
7 seeking da Vinci repair or maintenance services from IRRCs. The technical skill, experience, and  
8 certifications required to properly service the da Vinci also serve as prohibitive barriers to entry  
9 into the da Vinci Service Aftermarket.  
10

11 53. Quality control is not a valid business justification for excluding third parties from  
12 servicing and repairing da Vincis.

13 54. Several robot repair companies have the skill and capacity to service da Vincis.  
14 For example, Restore, a surgical robotic repair company based in Florida, specializes in the da  
15 Vinci and hires da Vinci certified field service engineers with prior training and experience  
16 working at Intuitive. Restore began offering service contracts for the da Vinci in 2018 and  
17 typically offers service at rates of less than 50% of the effective rates offered by Intuitive.  
18 Restore states that it can service da Vincis worldwide. SIS, with 50 years of experience servicing  
19 surgical equipment, also claims it is capable of servicing da Vincis. Great Lakes Robotics  
20 (“Great Lakes”) is another robot repair company that claims to be an “authorized” provider of da  
21 Vinci services through its partnership with Restore.<sup>28</sup>  
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28 <sup>28</sup> <https://www.greatlakesrobotics.net/>

**b. The Da Vinci Service Geographic Aftermarket**

55. Da Vinci robots are installed throughout the U.S., so IRRCs have the capability to service da Vincis throughout the U.S.

56. Intuitive sells and services da Vincis through third-party distributors in unspecified countries outside the U.S. and provides them with a toolkit with all the documentation, software, and passwords necessary to service the da Vinci. Distributors may only use their toolkits to service da Vincis in their territory. No one else has access to the toolkit, not even customers.

57. U.S. hospitals are thus unable to hire service providers from other countries, even if Intuitive raises its da Vinci servicing prices above competitive levels.

**c. Intuitive Has a Monopoly in the Da Vinci Service Aftermarket**

58. Intuitive exploits its monopoly power in the primary market for surgical robots to acquire and maintain monopoly power in the aftermarket for the service of the da Vinci. Thus, it can and does exclude competition and maintain supracompetitive prices for da Vinci service.

59. First, Intuitive ties the sale of the da Vinci to da Vinci service contracts. The terms of the sales and service agreements forbid purchasers from using third party repair or maintenance services of any kind. Intuitive even reserves the right to void their entire service contract if customers seek any kind of service, maintenance, or repair for their da Vinci through an IRRC. This effectively forecloses competition in the da Vinci Service Aftermarket.

60. All these measures discourage customers from attempting to service their da Vinci through an IRRC, further solidifying Intuitive's monopoly in the da Vinci Service Aftermarket.

1           61. As a result of this exclusionary conduct, Intuitive has directly maintained a  
2 market share in the da Vinci Service Aftermarket of more than 99% for nearly 20 years. In 2019,  
3 Intuitive reported \$508.4 million in revenues for service to its customers in the U.S.

4           **3. The EndoWrist Service Aftermarket and Intuitive’s Abuse of Monopoly**  
5           **Power in that Aftermarket**

6           **a. Relevant EndoWrist Service Aftermarket**

7           62. There is a relevant aftermarket for the service, including repair and replacement,  
8 of EndoWrists that is separate from the surgical robot market and the da Vinci Service  
9 Aftermarket. EndoWrists are the only surgical instruments that are compatible with and FDA-  
10 approved for use with the da Vinci. Because of these constraints, hospitals must have them  
11 serviced in order to use the da Vinci.

12           63. The EndoWrist Service Aftermarket is vertically integrated, meaning Intuitive  
13 exercises complete control over the design, manufacture, sale, and replacement of EndoWrists.  
14 Although Intuitive maintains a significant patent portfolio in its surgical robots, any blocking  
15 patents for its EndoWrist instruments are long expired. Intuitive maintains a “Patent Notice” web  
16 page for its products. Virtually all the patents covering core structure and operations for the  
17 “EndoWrist” and “Accessories” are expired.  
18

19           64. The EndoWrist Service Aftermarket is significantly larger than either the  
20 upstream da Vinci system market or the da Vinci Service Aftermarket. EndoWrists range in price  
21 from \$700 to \$3,500 per procedure. Intuitive’s revenues from the sale of instruments and  
22 accessories in the U.S. totaled \$1.79 billion in 2019, and despite the Coronavirus pandemic, 2020  
23 instrument and accessory revenues were an estimated \$1.785 billion.<sup>29</sup> By comparison, Intuitive  
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28           <sup>29</sup> Intuitive (Form 10-K), at 98 (Feb. 10, 2021).

reported revenues of \$830 million from system sales and \$508 million from service contracts in 2019.<sup>30</sup>

65. Indeed, the vast majority of Intuitive's EndoWrist revenue and profit, and thus its overall revenue and profit, comes from the *replacement* of EndoWrists. This is because while a da Vinci represents a large initial investment for Intuitive's customers, they are typically in service for 5 years, if not a decade, while EndoWrists provide a recurring revenue stream. Indeed, the bulk of Intuitive's revenue and profit growth over the last decade in the U.S. comes from its sale of EndoWrist instruments, not robotic systems, as demonstrated by data from Intuitive's 10-Ks from 2001 to 2019 below:<sup>31</sup>

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009
Instruments (\$M)	\$5.0	\$10.1	\$18.8	\$37.5	\$67.8	\$111.7	\$191.6	\$293.0	\$389.4
Systems (\$M)	\$44.2	\$56.3	\$61.8	\$78.8	\$124.6	\$205.9	\$324.4	\$455.3	\$490.5

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018
Instruments (\$M)	\$528.8	\$701.1	\$903.3	\$1,033	\$1,070	\$1,198	\$1,396	\$1,637	\$1,962
Systems (\$M)	\$660.3	\$777.8	\$932.9	\$834.9	\$632.5	\$721.9	\$800	\$928.4	\$1,127

Year	2019	2020
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<sup>30</sup> Intuitive (Form 10-K), at 87 (Feb. 7, 2020).

<sup>31</sup> These charts reflect Intuitive's worldwide revenues; revenues by region are unavailable prior to 2017.

Instruments (\$M)	\$2,408	\$2,455
Systems (\$M)	\$1,346	\$1,178

66. Because of Intuitive’s exclusionary service agreements, the EndoWrist Service Aftermarket typically involves replacing EndoWrist instruments rather than servicing them (i.e., cleaning, sharpening, or repairing them). The services provided by Intuitive and those provided (or that could be provided) by IRRCs are substitutable. For instance, hospitals hire Rebotix to inspect and repair EndoWrist instruments, for example, by tightening the graspers or sharpening the scissors. And SIS entered into contracts with several hospitals and health care systems to provide EndoWrist repair services. More hospitals would substitute EndoWrist instrument replacement from Intuitive with these services in the absence of Intuitive’s exclusionary contractual terms.

67. Intuitive’s sales agreements require hospitals to replace their EndoWrists exclusively with Intuitive. Per these contracts, Intuitive has the right to void warranties associated with the da Vinci if unauthorized or unapproved instruments are used with the da Vinci. This forces hospitals to continuously purchase replacement EndoWrists from Intuitive or risk voiding their service agreements for the entire system.

68. Intuitive’s standard sales agreement ties the purchase of a da Vinci to its “maximum number of uses” requirement for EndoWrist instruments. The usage requirement applies to every single EndoWrist instrument, regardless of its condition or whether it could be used on additional procedures.

69. Before releasing its EndoWrists to market, Intuitive told the FDA that the EndoWrists and traditional instruments “are essentially identical ... in terms of shape, size,



1 function, and tissue effect;” “are substantially equivalent in intended use and/or method of  
2 operation;” and “demonstrate substantial equivalence ... in terms of safety and effectiveness.”  
3 The FDA agreed and “determined the [EndoWrist] device” is “substantially equivalent” to the  
4 traditional devices. Instruments used in traditional laparoscopic surgeries are cleaned and  
5 inspected before and after each surgery and may be repaired between procedures, making them  
6 usable for hundreds of surgeries.

7  
8 70. As shown below in Figure 5, EndoWrist instruments are nearly indistinguishable  
9 from manually operated surgical instruments. Both are made from medical grade materials that  
10 typically last through hundreds of surgeries.<sup>32</sup> Figure 5 includes an EndoWrist instrument on the  
11 left and a traditional, manually manipulated instrument on the right, and illustrates that the  
12 instruments are nearly identical.

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<sup>32</sup> Rebotix Complaint, ¶39.

Figure 5: EndoWrist forceps vs. Traditional manual forceps



71. However, despite being “substantially equivalent” to traditional laparoscopic instruments, Intuitive limits most EndoWrists to *just 10 uses*, far fewer in orders of magnitude than their manually operated counterparts.

72. To enforce this arbitrary restriction, Intuitive installs memory chips in its EndoWrist instruments that count the number of uses. Intuitive has exclusive control over the usage counter, and once the counter hits its limit, the chip renders the EndoWrist non-functional by wiping its memory so that the EndoWrist can no longer communicate with the da Vinci. Intuitive has designed the EndoWrists to prevent the maximum usage counter from being tampered with or reset.

73. According to surgical instrument service companies, with proper care, inspection, and repair, EndoWrists can be used more than fifty times, just like the useful life of traditional, manually manipulated laparoscopic instruments.<sup>33</sup>

74. The maximum usage requirement for EndoWrists is not based on safety or effectiveness considerations. First, Intuitive has never provided its customers any clinical or scientific data to support its usage limits; Intuitive’s own instrument catalogs demonstrate that

<sup>33</sup> Restore Second Amended Complaint, ¶80.

1 the useful lives of the instruments are much longer than their usage limits. Yet irrespective of the  
2 actual condition of the EndoWrist once it hits 10 uses, it must be replaced without exception.  
3 Second, Intuitive described the EndoWrist to the FDA as possessing substantial equivalence in  
4 terms of safety and effectiveness to its manually manipulated counterparts, which have no  
5 specific usage limits. Third, when Intuitive sells EndoWrists for training purposes, the usage  
6 limits are much higher than the exact same instruments sold for surgical use, with no  
7 demonstrable or practical difference between the two. Nor does the surgical equipment industry  
8 distinguish between an instrument sold for clinical use and the same instrument sold for training  
9 use. Training instruments, like instruments for clinical use, must retain their functionality for the  
10 surgeon during use. The only difference is the generation of revenue for the hospital on a  
11 surgical procedure for an instrument in clinical use. Intuitive has stated that the maximum usage  
12 requirement allows Intuitive to “sell the instrument for a fixed number of uses or hours and  
13 effectively price our EndoWrist instruments on a per-procedure or per-hour basis,” but there are  
14 no medical necessity or patient welfare concerns motivating Intuitive’s usage caps; rather, this  
15 reflects Intuitive’s desire and ability to charge supracompetitive prices.<sup>34</sup>

18 75. And in July 2020, Intuitive introduced its "Extended Use Program" for EndoWrist  
19 instruments used with da Vinci X/Xi systems, where select instruments possess 12 to 18 uses  
20 instead of Intuitive’s standard 10-use limitation.<sup>35</sup> Intuitive vaguely stated that “continuous  
21 improvement in instrument design” enabled it to slightly increase some usage limits, but did not  
22 and has not explained why certain instruments were chosen for this program, nor why the usage  
23 limits can be upped to 12 or 15 or 18.  
24

27 <sup>34</sup> Intuitive (Form 10-K), at 6 (March 30, 2001).

28 <sup>35</sup> Intuitive (Form 10-Q), at 29 (July 23, 2020).

1           76.     Usage limits are not based on any FDA regulations. The surgical instruments used  
2 with Asensus' Senhance surgical robot system do not have usage limits. Traditional laparoscopic  
3 instruments do not have usage limits.

4           77.     As recently as November 12, 2020, Intuitive submitted a 510(k) premarket  
5 notification summary to the FDA for several EndoWrist instruments. The summary does not  
6 reference any clinical or scientific data showing that the EndoWrists lose their functionality after  
7 reaching the 10-use limit. Nor did Intuitive indicate that EndoWrists could not be serviced to  
8 make them safe and effective after reaching the 10-use limit.

10          78.     Customers cannot predict the costs for EndoWrists. Intuitive has complete control  
11 over EndoWrist usage limits and can (and has) changed the usage limits and instructions for use  
12 unilaterally and without notice. For example, Intuitive issued instructions for use for EndoWrist  
13 instruments, setting a maximum number of autoclave cycles, which sterilize the instruments  
14 using steam pressure. Because of the way that da Vinci surgeries are prepped and performed,  
15 EndoWrist instruments often have to undergo an autoclave cycle even if not actually attached to  
16 a robot during surgery. The specified limit on autoclave cycles is extremely low compared to  
17 comparable devices made of similar medical grade materials. These unilateral changes can force  
18 early replacement, even if the counter has not hit its maximum use limit. They also substantially  
19 increase (a) the per-surgery cost of EndoWrist instruments to hospitals, and (b) Intuitive's supra-  
20 competitive EndoWrist profits, without prior notice to hospitals. Intuitive, as the sole  
21 manufacturer of EndoWrists, exercises complete control over the prices for replacement  
22 EndoWrists. Thus, customers cannot reasonably predict the timing or pricing for replacing  
23 EndoWrists.  
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26          79.     There exist technological barriers to entry that prevent IRRCs from entering  
27 and/or competing effectively in the EndoWrist Service Aftermarket. For instance, for the  
28

1 EndoWrist instruments to work with the da Vinci, they must have a serial number from Intuitive.  
2 Thus, IRRCs may only repair the instruments and, to do so, they must be able to reset the  
3 instrument's usage counter after the repair.

4 80. IRRCs can service EndoWrists to prolong their use, rather than forcing hospitals  
5 to purchase replacement instruments based on artificially low usage limitations. For example,  
6 Rebotix has developed the Rebotix Interceptor, which resets the counter in at least some  
7 EndoWrists. The Interceptor does not interfere with the safety or functionality of the EndoWrist  
8 or communication between the EndoWrist and the da Vinci. However, the Interceptor has limited  
9 applicability as it works with just one da Vinci model. Restore specializes in the da Vinci and  
10 hires da Vinci certified field service engineers with prior training and experience at Intuitive.

12 81. And while Restore can reset the usage counter on EndoWrists for the Si robot  
13 system, it pays a large licensing fee to develop the technology to do so. Restore passes these  
14 costs on to its customers in the form of at least 20% higher service fees. Restore cannot reset the  
15 usage counter for other da Vinci systems, including the X and Xi robot systems.

17 82. SIS states that it has the personnel, facilities, equipment and experience to service  
18 at least 1,500 EndoWrists per month to prolong their use. In fact, SIS states it has already  
19 serviced and repaired EndoWrists that have since been used successfully and without incident in  
20 da Vinci surgeries. SIS also claims that independent testing shows that instruments serviced by  
21 SIS are suitable for at least 50 uses. SIS has developed detailed procedures for restoring  
22 EndoWrists to their original specifications and returning them to service. These procedures  
23 include disassembly of the EndoWrist, inspection of all components, adjustment of components  
24 as necessary, confirming all movements, and re-setting the EndoWrist counter to Intuitive's  
25 original counter value.  
26

1           83.     Intuitive has maintained a market share in the EndoWrist Service Aftermarket of  
2 more than 90% for nearly 20 years.

3                   **b. The Geographic Market for the EndoWrist Service Aftermarket**

4           84.     Intuitive is the sole manufacturer of EndoWrists worldwide and is the only seller  
5 of EndoWrists in the U.S.

6           85.     EndoWrists are the only surgical instruments that are compatible with and FDA-  
7 approved for use with the da Vinci, making them the only surgical instruments available for use  
8 with the da Vinci in the U.S.  
9

10          86.     U.S. hospitals are thus unable to buy EndoWrists, or potentially substitutable  
11 instruments, from suppliers in other countries, even if Intuitive raises its EndoWrist prices above  
12 competitive levels.

13                   **c. Intuitive Has Abused Its Monopoly Power in the EndoWrist Service**  
14 **Aftermarket**

15          87.     Intuitive leverages its monopoly in the surgical robot market to maintain and  
16 abuse its monopoly in the EndoWrist Service Aftermarket. Intuitive's standard sales and lease  
17 agreements tie the purchase of a da Vinci to its "maximum number of uses" requirement for  
18 EndoWrist instruments. The usage requirement applies to every single EndoWrist instrument,  
19 regardless of its condition or whether it could be used on additional procedures.  
20

21          88.     Intuitive has acted with the clear intent to limit competition in the EndoWrist  
22 Service Aftermarket by designing the usage counter to prevent IRRCs from resetting it. It is  
23 essential to competition in the EndoWrist Service Aftermarket that IRRCs are able to reset the  
24 usage counter after servicing the instrument. Otherwise, Intuitive's customers are forced to pay  
25 exorbitant sums to Intuitive for brand new EndoWrists they do not yet need.  
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1           89.     Intuitive actively monitors the EndoWrist Service Aftermarket to ensure its  
2 monopoly remains uninterrupted and its customers continue to buy EndoWrists they do not yet  
3 need. If a customer or IRRRC services an EndoWrist so that it can be used beyond Intuitive's  
4 arbitrarily set maximum usage limit, Intuitive sends a letter demanding that they cease and desist  
5 from resetting the memory chip to allow the da Vinci to continue communicating with the  
6 EndoWrist instrument. Intuitive has also attempted to scare potential competitors out of the  
7 EndoWrist Service Aftermarket. On or about February 12, 2019, Intuitive sent a cease-and-desist  
8 letter to Restore, demanding that it "immediately cease and desist" from "contacting Intuitive's  
9 customers to offer service related to Intuitive's products" and resetting the usage counters.  
10 Intuitive has also sent letters to Rebotix's customers, threatening to withhold necessary  
11 contractual maintenance if the hospital uses Rebotix's EndoWrist repair services. This would  
12 render the da Vinci useless. Further, after learning that its customers had entered into service  
13 contracts with SIS, Intuitive sent letters threatening to render the surgical robot inoperable and  
14 falsely claiming that using repaired EndoWrists would violate FDA requirements and intellectual  
15 property rights. SIS alleges that as a result of Intuitive's threats, all of its customers backed out  
16 of their service agreements with SIS.

19           90.     Intuitive's anticompetitive conduct enables it to charge its customers  
20 supracompetitive prices that are independent of and far exceed the cost of EndoWrist  
21 instruments. An internal review by the healthcare system Kaleida Health revealed an average  
22 instrument cost of \$3,400 per da Vinci procedure.<sup>36</sup> Restore Robotics claims that Intuitive  
23 charges approximately 30% higher prices on average for EndoWrist instrument replacement  
24 compared with EndoWrist instrument repairs by IRRRCs.

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27 <sup>36</sup> Perez, R. E. & Schwaartzberg, S. D., Robotic Surgery: Finding Value in 2019 and Beyond, Ann. Laparosc. Endosc.  
28 Surg. 2019; 4:51.

1           91. To protect its EndoWrist monopoly pricing, Intuitive has announced that as of  
2 2023, it intends to stop selling S and Si EndoWrist instruments, for which IRRCs can reset the  
3 usage counter. This will force its customers to upgrade their da Vincis to those using EndoWrists  
4 for which IRRCs cannot reset the usage counter.

5           92. As a result of their exclusionary schemes, Intuitive can and does charge  
6 supracompetitive prices to replace EndoWrists at significantly higher costs than offered by  
7 IRRCs to service EndoWrists for prolonged use.

8           93. As a result of this exclusionary conduct, Intuitive has maintained a market share  
9 in the EndoWrist Service Aftermarket of more than 90% for nearly 20 years.  
10

11           **B. Intuitive's Anticompetitive Conduct Injured Plaintiff and the Proposed Class**

12           94. The services provided by Intuitive and those provided (or that could be provided)  
13 by IRRCs are substitutable, such that being able to use IRRCs could save hospitals a significant  
14 amount of money. However, due to the exclusionary service agreements Intuitive ties to the sale  
15 or lease of the da Vinci, these substitute services are typically not a viable option for hospitals.  
16 Hospitals, therefore, have little choice but to pay higher prices to obtain da Vinci service and  
17 (more frequent) EndoWrist instrument replacement from Intuitive.  
18

19           95. EndoWrists are the only instruments that are FDA-approved to work with the da  
20 Vinci. Within its sales contracts for the da Vinci, Intuitive ties the sale of the system to  
21 renewable service contracts for EndoWrists. Thus, customers have no choice but to accept  
22 Intuitive's restrictive terms and supracompetitive pricing scheme for the service of the da Vinci  
23 and EndoWrists.  
24

25           96. Intuitive's tying scheme ensures high recurring revenues because it forces  
26 Intuitive's customers to constantly purchase EndoWrist instruments after as few as ten uses at a  
27 significant and unnecessary cost, instead of having them serviced for prolonged use.  
28



1           97. Even where an IRRC may disrupt or neutralize the EndoWrist counter, the  
2 instrument must be repaired before exercising the last available use, lest the system automatically  
3 disable the EndoWrist. This, in turn, robs the customer of one use every time the EndoWrist is  
4 serviced.

5           98. Restore claims to (a) offer service of the da Vinci at effective rates of less than  
6 50% of the effective rates offered by Intuitive, and (b) repair EndoWrist instruments at least 25%  
7 on average below replacement rates offered by Intuitive. SIS claims that a hospital would save  
8 55-70% by having their EndoWrists serviced by SIS rather than purchasing replacement  
9 EndoWrists. Similarly, Rebotix claims to provide significant savings to hospitals on EndoWrist  
10 instrument expenses, while providing as much safety and efficacy as Intuitive. And according to  
11 Great Lakes, repairing EndoWrist instruments could save hospitals more than \$100,000 per  
12 robot, per year.<sup>37</sup> With a current installed base of approximately 3,720 da Vinci systems in the  
13 U.S., this suggests a total savings of \$372 million per year if EndoWrists were repaired by  
14 IRRCs instead of being replaced by Intuitive. In the but-for world, absent Intuitive's unlawful  
15 restraints of trade, Intuitive would need to compete on price to protect an erosion of its market  
16 share in response to IRRC's lower prices, whether by reducing Intuitive's own prices for service,  
17 increasing the number of times an EndoWrist can be used, or both. The downward pressure on  
18 price that would result from unfettered competition between Intuitive and its IRRC rivals would  
19 inure to the benefit of all direct purchasers in the market, whether they would have purchased  
20 from Intuitive or an IRRC rival.

21           99. It is no secret that hospitals pay above and beyond what is necessary to maintain a  
22 da Vinci. For instance, according to a systematic cost assessment made on robotics in general  
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28 <sup>37</sup> <https://www.greatlakesrobotics.net/sales>

1 surgery: “Nowadays, the only commercially available robotic equipment (da Vinci®, Intuitive  
2 Surgical Inc.; CA, USA) is characterized by elevated cost, including the cost of acquisition,  
3 training, and equipment-instrument cost, as well as that of maintenance of the robotic system  
4 (with an annual service contract, over 100,000 US dollars).”<sup>38</sup>

5 100. By tying the service of the da Vinci, and the repair and replacement of its  
6 EndoWrists, to the sale of the da Vinci, Intuitive captures nearly 100% of the U.S. market for the  
7 da Vinci Service and EndoWrist Service Aftermarkets. And in its annual reports, Intuitive  
8 repeatedly notes how IRRCs may emerge and compete with Intuitive on price or offerings, and  
9 Intuitive’s failure to compete successfully with these IRRCs may cause its revenues to suffer.  
10 This acknowledgement from Intuitive demonstrates that absent Intuitive’s anticompetitive  
11 conduct, not only would the hospitals that purchased or leased da Vincis from Intuitive have  
12 cheaper alternatives from IRRCs in terms of servicing the da Vinci and/or EndoWrist  
13 instruments, but that Intuitive would also charge lower prices in order to better compete with  
14 these IRRCs.  
15

16 101. The exclusionary scheme has the effect of driving the majority of Intuitive’s  
17 annual revenues. First, demand for da Vinci service and EndoWrist service is largely derived  
18 from demand for da Vinci systems. So, by purchasing a da Vinci to attract more patients and  
19 skilled surgeons to their facilities, hospitals are automatically locked into the Intuitive-controlled  
20 aftermarkets for da Vinci service and EndoWrist replacement/service.  
21

22 102. In fact, in their 2019 10-K, Intuitive reported product revenue of \$2.621 billion in  
23 the U.S., of which 57% was attributable to instruments and accessories, and 16% was attributable  
24 to service contracts.<sup>39</sup> In the U.S., Intuitive reported (a) \$508 million in revenue from service  
25

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27 <sup>38</sup> Gkegkes, I. D., Mamais, I. A., & Iavazzo, C. (2017). Robotics in General Surgery: A Systematic Cost  
Assessment. *Journal of Minimal Access Surgery*, 13(4), 243–255. <https://doi.org/10.4103/0972-9941.195565>

28 <sup>39</sup> Intuitive (Form 10-K), at 56 (Feb. 7, 2020).

1 contracts, and (b) \$1.79 billion in revenue from instruments and accessories.<sup>40</sup> Furthermore,  
2 globally, in 2019, Intuitive's gross profit was 70.2% for products and 65.6% for service.<sup>41</sup>  
3 Intuitive's net income for 2019 in the U.S. was 31% of total revenue.<sup>42</sup> This greatly exceeds the  
4 average profit margin of 8.5% in the medical equipment repair & maintenance industry.<sup>43</sup> This  
5 level of supracompetitive profit margin is commonly observed in industries characterized by  
6 substantial barriers to entry and a single participant possessing a dominant market share, as is the  
7 case for Intuitive in the da Vinci Service and EndoWrist Service Aftermarkets.  
8

9 103. There is no legitimate business, safety, or efficiency justification for Intuitive's  
10 anticompetitive scheme, which was employed for the sole purpose of eliminating competition in  
11 the da Vinci Service and EndoWrist Service Aftermarkets, thereby causing Plaintiff and the  
12 proposed Class to pay significantly more than they would have in a competitive market for these  
13 services.  
14

#### 15 **CLASS ALLEGATIONS**

16 104. Plaintiff brings this action on behalf of itself and on behalf of a class (the "Class")  
17 consisting of all entities that paid Intuitive directly for da Vinci service and/or the service,  
18 including repair and replacement, of EndoWrists in the United States at any time from May 21,  
19 2017 to the present (the "Class Period"). Excluded from the Class are Defendant, its officers,  
20 subsidiaries and affiliates, and all government entities.  
21

22 105. Plaintiff seeks class certification pursuant to Rule 23(b)(3) of the Federal Rules of  
23 Civil Procedure.  
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26 <sup>40</sup> *Id.* at 87.

27 <sup>41</sup> *Id.* at 57.

28 <sup>42</sup> *Id.* at 45.

<sup>43</sup> Jack Curran, "Medical Equipment Repair & Maintenance Services," IBIS World, June 2020, at 7.

1           106.   **Numerosity.** Hundreds of hospitals, trauma centers and/or clinics have purchased  
2 da Vinci service and EndoWrist instruments during the Class Period pursuant to Intuitive  
3 contracts that tied sales of da Vincis to aftermarket sales of service. Thus, there are numerous  
4 Class members and joinder is impracticable. The Class members are identifiable from  
5 information and records that are required by law to be maintained by Defendant.

6           107.   **Typicality.** Plaintiff's claims are typical of the claims of the other members of the  
7 proposed Class. Plaintiff and members of the proposed Class purchased da Vinci service and/or  
8 EndoWrist surgical instrument service directly from Defendant during the Class Period at  
9 supracompetitive prices resulting from Defendant's unlawful actions. Plaintiff and members of  
10 the proposed Class have sustained damages in that they paid inflated prices for the service and  
11 repair of da Vinci systems and repair/replacement of EndoWrist instruments during the Class  
12 Period due to Defendant's conduct in violation of federal law.

13           108.   **Adequacy of Representation.** Plaintiff will fairly and adequately protect and  
14 represent the interests of the proposed Class. The interests of the Plaintiff are not antagonistic to  
15 those of the proposed Class. In addition, Plaintiff is represented by counsel, who are experienced  
16 and competent in the prosecution of complex class action, antitrust and consumer protection  
17 litigation.

18           109.   **Ascertainability.** Plaintiff has defined the Class so that Class members can be  
19 identified using objective criteria, i.e., entities that purchased da Vinci service and EndoWrist  
20 instruments directly from Intuitive during the Class Period. Defendant's data can identify all  
21 Class members.

22           110.   **Commonality and Predominance.** Questions of law and fact common to the  
23 members of the class predominate over questions, if any, that may affect only individual  
24 members.

111. Questions of law and fact common to the Class include without limitation:

- i. Whether Defendant's conduct constitutes an illegal tying scheme under Section 1 of the Sherman Act;
- ii. Whether Defendant's conduct constitutes illegal monopolization under Section 2 of the Sherman Act;
- iii. Whether Defendant abused its monopoly power in the U.S. surgical robot market in order to gain a competitive advantage in the markets to service and repair da Vinci systems and EndoWrist instruments in violation of Sections 1 and 2 of the Sherman Act;
- iv. Whether Defendant's conduct had the effect of substantially lessening competition in the (1) da Vinci Service; and (2) EndoWrist Service Aftermarkets;
- v. Whether Defendant's unlawful conduct caused Plaintiff and the proposed Class to pay more for da Vinci service, and to service, repair and/or replace EndoWrists than they otherwise would have paid; and
- vi. The appropriate measure of damages incurred by Plaintiff and the proposed Class.

112. **Superiority.** A class action is superior to other available methods for the fair and efficient adjudication of this controversy because joinder of all Class members is impracticable. The prosecution of separate actions by individual members of the Class would impose heavy burdens upon the courts and Defendant, and would create a risk of inconsistent or varying adjudications of the questions of law and fact common to the Class. A class action, on the other hand, would achieve substantial economies of time, effort and expense, and would assure uniformity of decision as to persons similarly situated without sacrificing procedural fairness or bringing about other undesirable results.

113. The interest of members of the Class in individually controlling the prosecution of separate actions is theoretical rather than practical. The Class has a high degree of cohesion, and prosecution of the action through a representative would be unobjectionable. The amounts at stake for Class members, while substantial in the aggregate, are not great enough individually to

1 enable them to maintain separate suits against Defendant. Plaintiff does not anticipate any  
2 difficulty in the management of this action as a class action.

3 **CAUSES OF ACTION**

4 **COUNT I – MONOPOLIZATION OF THE**  
5 **DA VINCI SERVICE AFTERMARKET**

6 114. Plaintiff and the proposed Class repeat and allege the foregoing allegations with  
7 the same force and effect as if here set forth in full.

8 115. Intuitive has willfully acquired and maintained monopoly power in the da Vinci  
9 Service Aftermarket in violation of Section 2 of the Sherman Act, 15 U.S.C. § 2.

10 116. As a direct and proximate result of the foregoing conduct, Plaintiff and the Class  
11 have been injured in their business and property in an amount not presently known.

12 **COUNT II – ATTEMPTED MONOPOLIZATION**  
13 **OF THE DA VINCI SERVICE AFTERMARKET**

14 117. Plaintiff and the proposed class repeat and allege the foregoing allegations with  
15 the same force and effect as if here set forth in full.

16 118. Intuitive has attempted to monopolize the da Vinci Service Aftermarket in  
17 violation of Section 2 of the Sherman Act, 15 U.S.C. § 2. Intuitive has the specific intent to  
18 monopolize the da Vinci Service Aftermarket by engaging in exclusionary conduct, has engaged  
19 in such conduct, and has a dangerous probability of success in achieving monopoly power.  
20

21 119. As a direct and proximate result of the foregoing conduct, Plaintiff and the Class  
22 have been injured in their business and property in an amount not presently known.  
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**COUNT III – TYING OF THE DA VINCI  
SERVICE AFTERMARKET**

120. Plaintiff and the proposed Class repeat and allege the foregoing allegations with the same force and effect as if here set forth in full.

121. Intuitive has engaged in an unlawful tying arrangement in unreasonable restraint of trade and commerce, in violation of Section 1 of the Sherman Act, 15 U.S.C. § 1. This illegal scheme tied da Vinci service to the sale of the da Vinci system.

122. Surgical robots and da Vinci service are separate products that are sold or leased in separate markets from one another.

123. At all times relevant to this action, Intuitive has maintained substantial economic power in the surgical robot market. Intuitive's tying arrangement has had anticompetitive effects in the domestic da Vinci Service Aftermarket.

124. Intuitive's tying scheme had no legitimate safety, efficiency, or business purpose. It achieved no legitimate efficiency benefits and had the anticompetitive effect of foreclosing competition in the market to service the da Vinci, such that Plaintiff and the proposed Class could only obtain these services from Intuitive.

125. A substantial amount of interstate commerce was affected by Intuitive's tying scheme. Intuitive reported \$508.4 million revenues from service contracts and \$1.790 billion revenues from parts and accessories in 2019 alone.

126. As a result of Intuitive's violations of Section 1 of the Sherman Act, Plaintiff and the Class have been injured in their business and property in an amount not presently known.

**COUNT IV – MONOPOLIZATION  
OF THE ENDOWRIST SERVICE AFTERMARKET**

127. Plaintiff and the proposed class repeat and allege the foregoing allegations with the same force and effect as if here set forth in full.

128. Intuitive has willfully acquired and maintained monopoly power in the EndoWrist Service Aftermarket in violation of Section 2 of the Sherman Act, 15 U.S.C. § 2.

129. As a direct and proximate result of the foregoing conduct, Plaintiff and the Class have been injured in their business and property in an amount not presently known.

**COUNT V – ATTEMPTED MONOPOLIZATION  
OF THE ENDOWRIST SERVICE AFTERMARKET**

130. Plaintiff and the proposed Class repeat and allege the foregoing allegations with the same force and effect as if here set forth in full.

131. Intuitive has attempted to monopolize the EndoWrist Service Aftermarket in violation of Section 2 of the Sherman Act, 15 U.S.C. § 2. Intuitive has the specific intent to monopolize the EndoWrist Service Aftermarket by engaging in exclusionary conduct, has engaged in such conduct, and has a dangerous probability of success in achieving monopoly power.

132. As a direct and proximate result of the foregoing conduct, Plaintiff and the Class have been injured in their business and property in an amount not presently known.



**COUNT VI – TYING  
OF THE ENDOWRIST SERVICE AFTERMARKET**

133. Plaintiff and the proposed class repeat and allege the foregoing allegations with the same force and effect as if here set forth in full.

134. Intuitive has near-absolute monopoly power in the domestic market for minimally invasive surgical robots. Intuitive has conditioned the sale and servicing of the da Vinci on customers buying replacement EndoWrists from Intuitive instead of repairing the EndoWrists that the customers already have, in violation of Section 1 of the Sherman Act, 15 U.S.C. § 1.

135. Surgical robots and the service, repair, and replacement of EndoWrists are separate products that are sold or leased in separate markets from one another.

136. Intuitive's tying scheme had no legitimate safety, efficiency, or business purpose. It achieved no legitimate efficiency benefits and had the anticompetitive effect of foreclosing competition in the market to service, repair and replace EndoWrists such that Plaintiff and the proposed Class could only obtain these services from Intuitive.

137. A substantial amount of interstate commerce was affected by Intuitive's tying scheme. Just in 2019, Intuitive's total revenues from parts (primarily EndoWrists) exceeded \$1.790 billion, and Intuitive reported \$508 million revenues from service contracts. These amounts account for 73% of Intuitive's revenues in 2019.

138. As a result of Intuitive's violations of Section 1 of the Sherman Act, Plaintiff and the Class were injured in their business and property in an amount not presently known.

**PRAYER FOR RELIEF**

WHEREFORE, Plaintiff and the proposed Class respectfully request the following relief:

A. Certify the Class pursuant to Rule 23 of the Federal Rules of Civil Procedure, certify Plaintiff as a Class representative and designate its counsel as counsel for the Class;

1 B. Declare that Defendant's conduct constitutes a violation of Sections 1 and 2 of the  
2 Sherman Act;

3 C. Award Plaintiff and the members of the proposed Class damages determined to  
4 have been sustained by each of them, trebled as provided by law;

5 D. Award Plaintiff and the proposed Class their costs of the suit, including attorneys'  
6 fees, as provided by law; and

7 E. Grant such other relief as this Court may deem just and proper.  
8

9 **JURY DEMAND**

10 Plaintiff and the Class hereby demand trial by jury of all issues properly triable thereby.

11 Dated: May 20, 2021

12 Respectfully Submitted,

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28